

WHAT IS CLAIMED IS:

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1. An injection apparatus, comprising:  
an injection frame;  
a stator attached to the injection frame;  
a rotor disposed radially inward of the stator  
10 to be rotatable relative to the stator; and  
a ball screw disposed radially inward of the  
rotor,  
wherein the rotor includes a hollow and  
cylindrical member disposed radially outward of the ball  
15 screw, and a magnet attached to an outer circumference of  
the hollow and cylindrical member.

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2. An injection apparatus, comprising:  
an injection frame;  
a stator attached to the injection frame;  
a rotor disposed radially inward of the stator  
25 to be rotatable relative to the stator; and  
a rotary slide member disposed radially inward  
of the rotor,  
wherein the rotor includes a hollow and  
cylindrical member disposed radially outward of the  
30 rotary slide member, and a magnet attached to an outer  
circumference of the hollow and cylindrical member.

3. An injection apparatus, comprising:  
an injection frame;  
a cylinder member attached to the injection  
frame;  
5 an injection member disposed within the  
cylinder member such that the injection member can  
rotate and can advance and retreat;  
a stator attached to the injection frame; and  
a rotor disposed radially inward of the stator  
10 to be rotatable relative to the stator,  
wherein the rotor includes a hollow and  
cylindrical member, and a magnet attached to an outer  
circumference of the hollow and cylindrical member.